

2009-2011 BIENNIAL REPORT



North Dakota Department
of Transportation

NDDOT
North Dakota
Department of Transportation

submitted by

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Bismarck, North Dakota

www.dot.nd.gov

DIRECTOR

Francis G. Ziegler, P.E.

December 1, 2011



North Dakota Department of Transportation

Francis G. Ziegler, P.E.
Director

Jack Dalrymple
Governor

December 1, 2011

The Honorable Jack Dalrymple
Governor of North Dakota
600 East Boulevard Avenue
Bismarck, ND 58505-0001

Dear Governor Dalrymple:

In compliance with Sections 24-02-01 and 54-06-04 of the North Dakota Century Code, I present to you the Biennial Report of the North Dakota Department of Transportation for fiscal years 2009 to 2011.

This biennium proved to be a busy and challenging time for the North Dakota Department of Transportation (NDDOT). Harsh winters and wet springs, caused major flooding issues across North Dakota and resulted in a large number of Emergency Repair projects throughout the state.

Because of the dedication and quick response of our staff, North Dakota's transportation system was maintained under difficult circumstances. NDDOT employees have worked hard to meet the challenges while continuing to provide a reliable and safe transportation system.

The State of North Dakota increased its financial commitment to transportation infrastructure when a landmark transportation funding bill for the 2009-2011 biennium was signed into law. In addition to increases in traditional highway funding, which is based on the state motor fuel tax and vehicle registration fees, funding was added so that overall funding for the biennium reached \$1.35 billion, compared to \$903 million provided in the previous biennium.

This comprehensive transportation package for North Dakota funded maintenance and enhancement of the state's transportation system. It included an unprecedented sum in non-matching State General Fund dollars. It also included funding to rebuild our roads and help cities, counties and townships recover from statewide flooding.

A few of the many accomplishments completed this biennium include: completing construction of the Drayton Bridge, crossing the Red River near Drayton, N.D.; launching a teen drivers website to inform teens about safe driving habits; and construction of the US Highway 85 Super 2 highway, with intermittent passing and turn lanes, between Watford City and Williston.

As economic activity continues to flourish in North Dakota, the NDDOT is dedicated to our mission of maintaining and enhancing our transportation system while providing a system that safely moves people and goods.

Sincerely,

Francis G. Ziegler, P.E.
Director

Enclosure

North Dakota Department of Transportation

Biennial Report: July 1, 2009 through June 30, 2011

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Statutory and Constitutional Responsibilities

Creation

The first North Dakota State Highway Commission was created in 1913. The North Dakota Department of Transportation was created by 1989 North Dakota Session Laws Ch. 22, codified as North Dakota Century Code, Title 24.

Function

NDCC § 24-01-01 and 24-03-02 make NDDOT responsible for the construction, maintenance, protection, and control of the highways comprising the state highway system. NDCC § 39-01-01.1 describes the general responsibilities of the Drivers License, Safety and Motor Vehicle Divisions. When authorized under NDCC § 24-04-01, the Department of Transportation Director may enter into contracts and do all things necessary to cooperate with the federal government in the construction of roads under the provisions of a congressional act.

Funding

The state highway fund must be spent in the following order of priority: (1) maintenance of the state highway system, and (2) the cost of construction and

reconstruction in an amount necessary to ensure federal aid available to the state. Monies not spent under (1) or (2) may be spent on state highways for construction, improvement, or maintenance. (NDCC § 24-02-37).

National Highway Safety Act of 1966

Under NDCC § 54-07-05, the Governor has the responsibility of dealing with the federal government with respect to the state's participation in the national Highway Safety Act of 1966. The Governor has designated the Director of the Department of Transportation to act on his behalf in administering that act.

Rail Service Assistance

The department, with the approval of the Public Service Commission, has the authority to qualify the state for rail service assistance under the Railroad Revitalization and Regulatory Reform Act of 1977. (NDCC § 49-17.1-02).

State Aeronautics

The ND Aeronautics Commission is responsible for the state's air transportation.

Key 2011 Legislation

HB 1012 – This is NDDOT's appropriation bill which provides funding to operate the department during the 2011-2013 biennium. The bill approved \$1.67 billion for state, county, city and township roadways, as well as funding for other programs which provide snow and ice control, road maintenance, drivers license and motor vehicle registration services throughout North Dakota. The bill also appropriated non-matching State General Fund dollars including:

- \$228.6 million for Extraordinary State Highway Maintenance – oil impact fund.
- \$142 million for County and Township Road Reconstruction program – oil impact fund.
- \$60 million for non-oil producing counties to utilize for transportation projects on city, county and township roads.

HB 1109 – The bill extended drivers license renewal dates two years and changed renewal fees. (Does not apply to drivers under the age of 18 or over the age of 78.)

HB 1195 – The bill banned texting while driving a motor vehicle. The fine for violation of this law is \$20.

HB 1256 – The bill enacted new requirements for the minor drivers license process. Minor drivers must be at least 15 years of age and have held an instruction permit for a period of 12 months. Under the age of 16, cannot drive between 9 p.m. and 5 a.m. unless driving to or from work, school or religious activities, or if accompanied by an adult. Under the age of 16, must complete North Dakota Drivers Education Requirements. Drivers under the age of 16 must accumulate a minimum of 50 hours supervised behind-the-wheel driving experience in various driving conditions. Any driver under the age of 18 is prohibited from using electronic communication devices while driving.

SB 2157 – This bill enacted a \$250 fine for motorists going around a road closed barrier or knowingly entering a road closed due to hazardous conditions.

Major Goals

Goal 1: Improve the quality and efficiency of transportation systems and services.

NDDOT is always looking for ways to improve the quality of its products and efficiencies in its programs and services.

The department is attaining this goal by aligning the infrastructure assets under one program, evaluating other programs, processes and policies and redefining the performance measurement system.

Goal 2: Enhance customer satisfaction.

The NDDOT strives to provide the best products and services to its customers. The department administers a customer satisfaction survey every two years with the outcomes of those surveys being evaluated during the departments strategic planning sessions. The department is also improving procedures in communicating with customers and providing them with more opportunities to participate in the transportation planning process.

Goal 3: Improve traveler and workforce safety.

It is paramount to the department to provide the safest driving and working environment for the traveling public and its own employees.

The department accomplishes this by coordinating

programs with traffic safety stakeholders in the pursuit of a “Zero Deaths” goal.

Departmental employees’ safety and security are also addressed to ensure that all employees are provided a safe and secure working environment, whether that is in an office or during road construction.

Goal 4: Enhance employee recruitment, development, and wellbeing.

The department views its employees as its most valuable asset. Past departmental goals and objectives have increased retention and recruiting abilities.

In moving toward the future, the department conducted a workforce assessment to better understand the required specialties and staffing levels required to meet the future service requirements of its customers.

Goal 5: Strengthen stakeholder relationships

Building relationships with stakeholders is always a goal for an organization. The department communicates to its stakeholders and promotes partnerships between those stakeholders.

Partnerships are essential when building or repairing infrastructure projects that has the ability to affect a vast majority of citizens in the state.

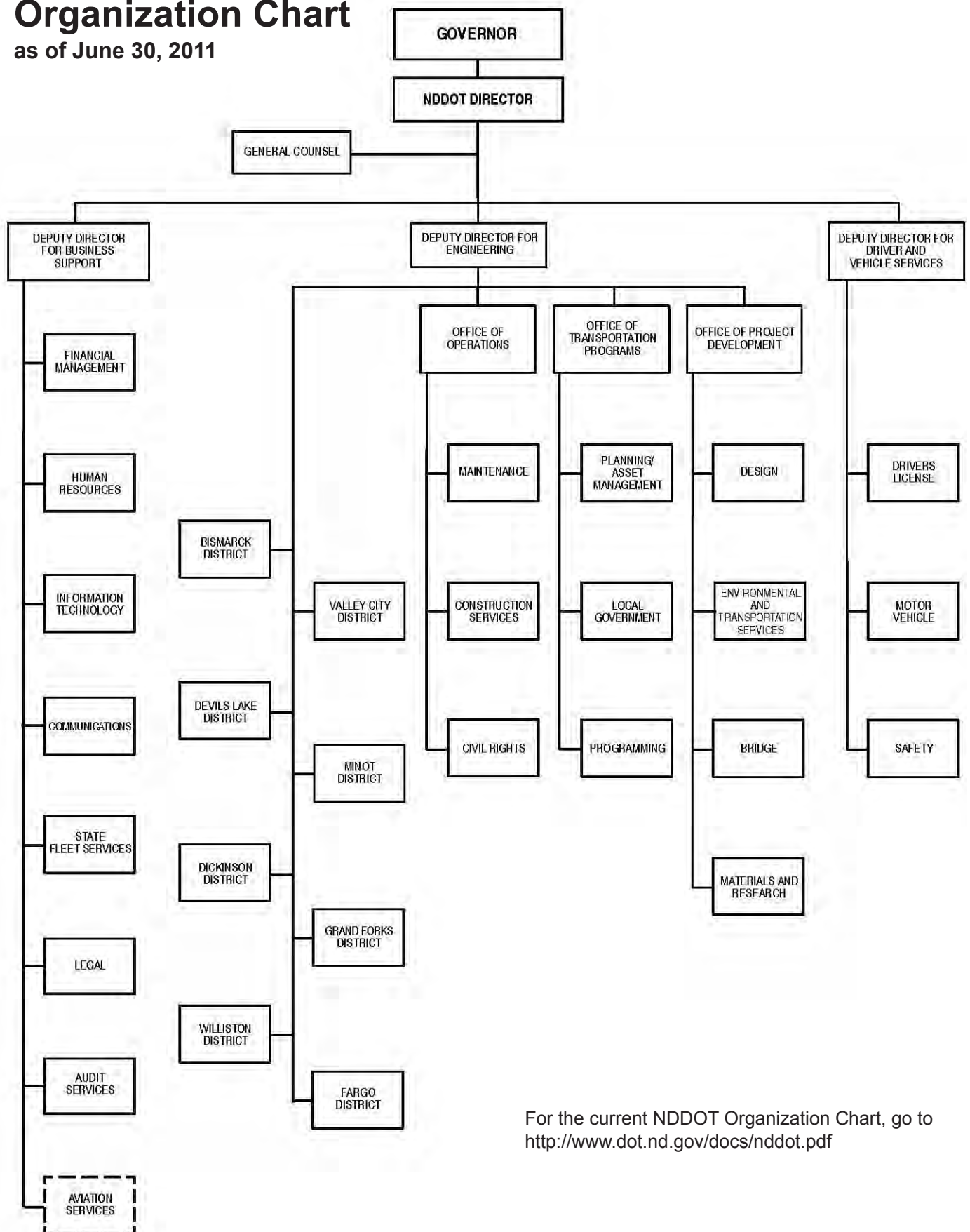
Financial Data

Audited financial information for the Department of Transportation is available from the North Dakota

Office of Management and Budget. This information can also be found online at www.nd.gov/fiscal.

Organization Chart

as of June 30, 2011



For the current NDDOT Organization Chart, go to <http://www.dot.nd.gov/docs/nddot.pdf>

*The Office of
Business Support
includes all
administrative
divisions and the
communications
function. The
Deputy Director is
Dave Leftwich.*

Office of Business Support

Audit Services

Daryl Splichal, Director

Responsibilities and Activities

The Audit Services Division is responsible for performing and overseeing internal audit functions, conducting audits of consultant engineers indirect cost rates and project costs, and verification of railroad and utility project costs. Audit Services is also responsible for motor carrier program audits, including federally required audits of International Fuel Tax Agreement (IFTA) and International Registration Program (IRP) registered North Dakota based motor carriers.

Key Accomplishments:

The Audit Services Division was established as a separate division during the 2009-2011 biennium. An Audit Coordination Committee was formed in late 2009 to review and approve internal and external audit activities.

The Audit Services Division has focused on completion of mandated motor carrier audits and reviews of consulting engineers' indirect cost rates. IFTA and IRP program requirements include completion of audits for an average of three percent of registered motor carriers each year. This equates to completion of approximately 65 motor carrier audits each year. Indirect cost rates submitted by architectural and engineering consulting firms for work on transportation projects are reviewed to ensure they comply with applicable federal regulations. Audit Services adopted the *2010 Uniform Audit & Accounting Guide* in its reviews of consulting firms and helps to educate the firms regarding allowable costs. Approximately 15 firms were reviewed each of the past two years to verify project costs and overhead rates. Other project audits include review of railroad transportation, safety and other local government transportation construction projects.

Internal audits of district inventory procedures and other NDDOT division procedures were conducted annually. Meetings were held with NDDOT management personnel during 2011 toward expansion of internal audit activities. It is anticipated that internal audit projects will increase to include additional reviews of internal controls and other NDDOT activities as risk-based audit plans are developed.

Communications

Peggy Anderson, Director

Responsibilities and Activities

The Communication Division is responsible for all aspects of communication within the North Dakota Department of Transportation (NDDOT). This includes internal communications with NDDOT employees and external communications with the general public, media, legislators, civic groups and stakeholders.

The NDDOT communicates externally through the use of a Web site that contains up-to-date information about the Department, its programs, policies, goals and its mission. The newest external communication outlet used by the department is social media, such as Facebook and YouTube. Other avenues for external communication include: public meetings and hearings, letters to the editor, interviews with local TV and radio stations,

news releases, ads and notices, press conferences, and presentations with various civic and local government groups. The Communication Division is also responsible for facilitating internal communications with our employees and constituents. The primary venue for internal communication is an employee-only Web site known as “MyDOT.” Communications also publishes “The Grapevine,” a monthly newsletter available to current and former employees online, by email and by traditional mail. The Communication Division also serves as a resource to the entire department by providing assistance in areas such as: talking points, speeches, PowerPoint presentations, videos, biennial reports, and brochures.

Also part of the Communication Division is the Multi-Media Section. This section is responsible for shooting, editing and producing videos utilized for public meetings, presentations to stakeholders, educational films featured on Prairie Public TV and transportation project informational videos. Multi-Media is also responsible for designing various print media such as posters, advertisements, brochures, handbooks, technical and statistical manuals, study guides, proofreading and graphics. Also included are Web site design and maintenance, photographic enhancements, still photography, organizing and filing photographs from events across the state.

Key Accomplishments

During the 2009-2011 biennium, the Communication Division worked closely with every division and district throughout the NDDOT on numerous projects and campaigns. The following accomplishments represent some of the highlights of the biennium.

2010

- Launched the ND Teen Drivers Web site to provide safety messages and driving information to teenage drivers.
- Completed the first ND Teen Drivers Traffic Safety Contest and announced Rugby High School as the statewide winner.
- Completed production of the DVD “Four Bears Bridge: Its History and Construction” which aired on Prairie Public Television.
- Completed production of the DVD “Crossing the Water – An Oral History of Four Bears Bridge.”
- Won a Telly Award for “Four Bears Bridge: Its History and Construction.” The Telly Award honors the very best in local, regional and cable television programs and the best in video productions.

- Was presented with the Communicator Award of Distinction for “Four Bears Bridge: Its History and Construction.” The Communicator Award is the leading international awards program for communication professionals, honoring the best work in print, video, interactive and audio.
- Assisted in NDDOT hosting over 450 transportation delegates from 18 states for the 89th annual WASHTO Conference in Bismarck.



Francis Ziegler, NDDOT Director, welcomes delegates to the WASHTO 2010 annual conference hosted by NDDOT in Bismarck.

2011

- Provided up-to-date information regarding flood events throughout much of the state through the use of news releases, the department’s Web site and Facebook page and the Emergency Operations Center Web site.
- Held the second annual ND Teen Drivers Traffic Safety Contest, and announced the winners of the two categories – 30-second PSA production and billboard design – during press conferences held at Shiloh Christian School in Bismarck and Valley City High School.
- Developed a video about the 100th anniversary of the Motor Vehicle Division.
- Awarded Telly Awards and Communicator Awards of Distinction for “Crossing the water – An Oral History of Four Bears Bridge” and the re-edit of “Old Timers,” which is video made up of interviews from employees who worked for the ND Highway Department in the 1930s and 1940s and is shown at employee orientation to provide insight into what it means to work for the department.
- Set a new season high for weather-related news releases distributed to the public between October 2010 and September 2011 by sending out 353 news releases, compared to 303 in 2009.

Financial Management

Shannon Sauer, Director

Responsibilities and Activities

The Financial Management Division is responsible for the department's accounting and reporting functions including:

- Development and oversight of fiscal policy and procedure.
- Accounting and financial reporting.
- Budgeting development and monitoring.
- Payroll.
- Procurement.
- Revenue forecasting.
- Central supply.
- Cash management.
- Disposal of highway equipment and materials.

- Coordination with external auditors.

Key Accomplishments

During the past biennium, the Financial Management Division completed the following accomplishments:

- Accounted for nearly \$1.2 billion in state and federal revenues and expenditures.
- Processed approximately 120,000 vendor payments.
- Processed and issued approximately 31,000 payroll checks.
- Developed the budget for the 2011-2013 biennium which totals nearly \$1.7 billion.
- Completed the first phase of the department's inaugural fraud risk assessment.

Human Resources

Michael Sandal, Director

Responsibilities and Activities

The Human Resources Division (HRD) is responsible for a broad spectrum of programs impacting NDDOT employees. Responsibilities include, but are not limited; to recruitment and retention, salary administration, employee relations, payroll, performance and career development, position classification, policy development, management services and other activities that may arise due to legislative action or priorities.

Enterprise Learning Management (ELM)

HRD and Information Technology Division (ITD) provided the lead coordinators and subject matter experts to develop and implement the Enterprise Learning Management (ELM) system, which is a part of PeopleSoft. ELM is designed to be a self-service process for employees to explore workforce development options and self-enroll in training activities. Following managerial approval and attendance, employees have access to a current training record. Either the employee or supervisor can set up a learning plan for future employee development.

Strategic Training Plan

Following an executive decision to partially centralize training, the engineering and technical training function

was moved to HRD. A strategic workforce development plan is being developed by staff from HRD and ITD. A major change is the relationship between NDDOT and the Transportation Learning Network (TLN), which is a major provider of engineering and technical training. Through an assessment process, involving the member states of North Dakota, South Dakota and Wyoming, a training program was developed to better suit the states' needs. NDDOT will continue the in-house training-related programs, such as Mentoring Opportunities and Rotational Training. In the 2009-2011 biennium, 993 sessions were coordinated and processed.

Leader Development Programs

The department has a three-level effort to improve the leadership skills and capabilities of our employees:

- The basic level training program is *The 21 Indispensable Qualities of a Leader*.
- The intermediate level training program is *The 360° Leader: Developing Your Influence from Anywhere in the Organization*.
- The advanced level training program is *The 21 Irrefutable Laws of Leadership*.

Throughout the biennium, 58 employees completed one of these courses.

Salary Administration

In 2009, the Department proactively adopted, within the state's salary structure, a market target salary for each job classification to ensure the Department's salaries remained competitive in relevant employment markets. Division efforts were acknowledged by the HAY Group classification/compensation study recently reported to the 62nd Legislative Assembly.

Statewide flooding, the "oil boom" and budget limitations have slowed full implementation of the salary plan. Full implementation of the plan remains a priority.

North Dakota's aging population and the shrinking pool of qualified applicants within the state amplified our staffing challenges. Throughout the biennium recruitment and retention bonuses were provided to supplement the department's staffing efforts. The increasingly higher cost of labor in oil-producing regions continues to impact the effectiveness of the bonus programs. In May 2011, the department supplemented the bonus program with an "Oil Patch Add-On," which supplemented salaries to Drivers License Examiners, Maintenance and Shop personnel in areas impacted by oil exploration activities.

During the second half of the biennium, the department realigned the hourly salaries paid to temporary employees more closely with market rates for the actual job duties they perform. This group includes the seasonal employees that are required to maintain high customer service levels to NDDOT customers, especially during the winter snow and ice control season.

Wellness

The Wellness Program provides opportunities and activities encouraging employees to choose healthy lifestyle behaviors. Examples are wellness challenges

and on-site flu clinics, where for some locations the participation has doubled this biennium.

TRAC Program

TRAC is a hands-on math and science curriculum, designed around transportation focused projects intended to introduce and raise student interest in civil engineering and transportation professions. In 2009-2010 we added one new school bringing the total schools to 21 with 1,476 students exposed to engineering, transportation and the NDDOT. In 2010-2011 we added three new schools for a total of 24 schools involved in the TRAC program.

Grants and Internship Program

The internship program provides hands on experience in NDDOT Divisions and Districts for college students. NDDOT had 71 interns participate this biennium in this win-win program. Grants were awarded to five college students majoring in engineering related fields; NDDOT offered employment to these students upon graduation.

Employee Management System (EMS)

This web-based computerized system was developed to take the place of the current Lotus Notes system which was no longer supported. This system houses the Position Information Questionnaires (PIQs) which are descriptions of position duties; classification request forms; annual Employee Performance Reviews and Professional Development Plans; Employee Probationary/Supplemental Reviews; and Temporary Employee Performance Reviews. The end result will be the elimination of the paper process and the system will be the storage facility for these documents.

Information Technology

Russ Buchholz, Director

Responsibilities and Activities

The Information Technology Division (ITD) is responsible for all technology-related activities including information systems, network and PC support, telecommunications, video conferencing, wired and wireless technology, information processing, technology training, Web development and implementation, and e-business. ITD is also responsible for records management, photography, printing, mailing, and building security. In addition, staff is involved with various local, state, and national committees including: Continuum of

Government, Highway Engineer Exchange Program, specific NDDOT strategic business plans, Enterprise Architecture, United States Postal Service Postal Customer Council, Research Advisory, Research and Engineering, State Interoperability for Communication, WASHTO, and AASHTO committees.

Key Accomplishments

Systems and Applications

Employee Management System (EMS). EMS was established to replace the Lotus PIQ application

Information Technology continued...

(classification and PIQ information) and provides a system to initiate, update, and store performance reviews of NDDOT employees, which are conducted annually along with periodic reviews.

Maintenance Equipment Tracking System

(METS). This application created a usage reporting and billing process to a web-based application. It enables districts and sections to enter in their own ending odometer readings throughout the month as the usage takes place instead of just once at the end of the month. The application provides detailed reporting functionality which replaces the multiple processes being used at the department level.

Motor Vehicle and Drivers License

Facial Recognition. New software application that ties directly to the Digital Drivers License System which validates against existing images for possible fraud or identity theft. The system is also utilized by the Bureau of Criminal Investigation (BCI) for law enforcement purposes.

Performance and Information Systems Management (PRISM). Implemented Phase 1 of a three-phase project. Phase 1 is a verification check of motor carriers identification against the national database to insure unsafe carriers or vehicle cannot be issued registration. Phase 2 and 3 will require suspending unsafe carriers.

National Motor Vehicle Titling Information System (NMVTIS). Prior to any title issuance, a vehicle identification number is checked against a national database to insure the vehicle is not stolen, damaged or has fraudulent ownership documentation. We send daily updates to the NMTIS Central Site of ownership, damage or odometer changes.

Temporary Registration. Developed a new web-based application to replace a manual, over-the-counter issuance of temporary registrations due to the increase of out-of-state workers in North Dakota. Fees and time periods were established by the last legislative session, but the bill had an emergency clause so was implemented last biennium. To date, we have collected over \$830,000 in fees.

Engineering

Travel Information Map. The department has been working on major re-write of the Road Condition Reporting System, which is called the Travel Information Map. This provides a zoom-capable view with

multiple screens to give the public the most current road information available through a web interface.

Maintenance Decision Support System (MDSS) Automated Vehicle Locator (AVL) Pilot Project.

This phase of the project expanded to multiple vehicles in all eight districts by retro-fitting trucks with the AVL/GPS equipment to cellular technology and solid state drives. In addition, cameras and larger monitors are being added for better visual of equipment while in operation.

Telecommunications

Mobile Radio Replacement. We are in the process of replacing all the department's analog (more than 900) mobile and handheld radios to digital before the January 2013 mandate. Five of the eight districts have completed the radio replacement and are fully digital operational.

Wireless Booster. We have upgraded the Central Office with additional cellular capabilities and provided the Valley City District with a wireless booster at the District Headquarters, which provides continuity support for floods, blizzards, and other emergencies within that region.

Computer Network Services (Helpdesk)

Computer Network Services (CNS). The section maintained and supported NDDOT employees, maintaining 1,030 computer desktops, workstations, laptops, plus other peripheral devices including printers, plotters, scanners, PDAs, cell phones, and security software and devices. This biennium, wireless operability was expanded by deploying wireless access points throughout the eight districts and Shops, added Adobe Professional as a baseline to all operating systems and implemented Windows7 as their primary operating system. In addition, ITD supports NDDOT and division-based conferences, video conferences, and remote offices with IT equipment and support.

Photography, Printing, and Mail Center

Mail Center and Printing. A large-capacity printer was installed to handle the printing requirements of the department and additional requirements from the Motor Vehicle Division, who upgraded their vehicle renewal process. A wide-format color printer was also purchased to produce a much higher level of quality of graphics for presentations, displays, and other department necessities.

Legal

Paul Seado, General Counsel

Responsibilities and Activities

The Legal Division provides general counsel legal services and advice to NDDOT in all areas, with emphasis on: pre-litigation issues, drivers license and motor vehicle administrative matters, contract development, negotiation, drafting, and administration assistance, review of nonconstruction and construction-related contract documents, risk management, legislation, and administrative rule making.

Key Accomplishments

July 1, 2009 – June 30, 2010

- Legal Division held 1,994 drivers license hearings; 1,646 were implied consent hearings (DUIs).
- Legal Division reviewed and assisted with the administration of approximately 1,902 contract documents.

July 1, 2010 – June 30, 2011

- Legal Division held 2,257 drivers license hearings; 1,925 were implied consent hearings (DUIs).

- Legal Division reviewed and assisted with the administration of approximately 1,967 contract documents.

July 1, 2009 – June 30, 2011

- Legal Division held 4,251 drivers license hearings. Implied consent hearings (DUIs) increased by 9 percent over the previous biennium.
- Legal Division reviewed and assisted with the administration of approximately 3,869 contract documents, a 21 percent increase over the previous biennium.

The Legal Division is expected to meet additional challenges during the 2011-2013 biennium in the areas of right-of-way acquisition, contracts and risk management.

State Fleet Services

Paul Hanson, Director

Responsibilities and Activities

The function of State Fleet Services is to purchase, manage, operate, maintain and dispose of the state's licensed motor vehicles (approximately 3,350 vehicles). In addition, State Fleet Services conducts defensive driving course training for all state vehicle drivers, manages the alcohol and controlled substance testing for all state agency and university Commercial Drivers License (CDL) drivers and the NDDOT insurance programs.

Key Accomplishments

On July 1, 2009, State Fleet Services launched the new online Billing and Usage System (BUS) and a new motor pool reservations system which replaced the obsolete mainframe systems. The new systems made the billing process web-based, paperless and created reporting features for all users.

Over the biennium, State Fleet Services expanded the use of hybrid vehicles from 13 to 22.

By purchasing more fuel efficient vehicles, the average fuel economy of the sedan fleet has improved from 25.7 mpg to 26.5 mpg, saving approximately 13,000 gallons of fuel annually. Overall, the light vehicle fleet mileage improved this past year to save approximately 18,250 gallons of fuel equating to a savings of \$53,290.

On July 1, 2010, State Fleet Services launched the new online reservations system allowing users to reserve a motor pool vehicle by simply logging-in on their computer.

In June 2010, State Fleet Services was named number 72 among all government fleets by *100 Best Fleets*. This is a contest among the 38,000 city, county, state and federal fleets.

*The Office of
Driver and
Vehicle Services
includes the
Drivers License,
Motor Vehicle and
Safety Divisions.
The Deputy
Director is
Linda Butts.*

Office of Driver and Vehicle Services

Drivers License

Glenn Jackson, Director

Responsibilities and Activities

The Drivers License Division is visited by more than a quarter of the state's population each year. Drivers License provides front counter services for a driver's permit, license, renewal, or identification card; driving records or crash reports; or suspension-related driving behavior fees. All 28 Drivers License sites are fully automated for customer convenience. Law enforcement, the court system and insurance companies rely on the quality and accessibility of conviction and crash report data gathered and maintained by the division.

Key Accomplishments

From July 1, 2009, through June 30, 2010, the division processed 394,811 permits, licenses and identification cards; administered 140,601 written tests, 72,060 driving tests and 290,432 vision tests. In addition, 64,731 suspensions, revocations and cancellations were issued; 278,244 traffic citations were processed; 4,778 Temporary Restricted Licenses were processed and 6,134 hearings were processed.

Motor Vehicle

Linda Sitz, Director

Responsibilities and Activities

The Motor Vehicle Division administers all programs relating to the titling and registration of vehicles. The division regulates motor vehicle dealers, interstate motor carriers, mobility-impaired parking privileges and intrastate household goods carriers. It also is responsible for maintaining and making available records created by its various activities. The division serves the public throughout the state through services provided at its Central Office in Bismarck, seven privatized branch offices, six chamber of commerce offices, seven county treasurer's offices, in person, by mail, by fax, by email and through the internet. Six branch offices also provide partial registration services to interstate motor carriers, who no longer need to conduct their transactions in Bismarck. Branch offices located within the same building as the department's Drivers License testing sites are in Jamestown, Minot and Dickinson. All of these licensing and registration operations provide enhanced customer service for the citizens of our state.

Key Accomplishments

During the 2009-2011 biennium the Motor Vehicle Division processed more than 3 million customer transactions, and responded to approximately 275,000 customer inquiries via telephone, email, letter and fax. The division registered 934,502 vehicles in FY 2009 and 970,993 in FY 2010.

Use of the online vehicle registration renewal system continues to increase. During the biennium 344,309 vehicles were renewed online, for an average of approximately 22 percent of all renewals processed.

The division increased dealer enforcement, while increasing dealer communication using mail as well as email with the *Dealer Dispatch* quarterly newsletter. The improvement in communication decreased the number of dealer violations and enhanced the relationship between the dealer community and the division. Additionally, the Motor Vehicle Division

implemented the following enhancements: electronic correspondence, the National Motor Vehicle Titling Information System (NMVTIS) and started the development of an electronic training program. These items helped improve communication between dealers, branch offices and citizens.

Safety

Mark Nelson, Director

Responsibilities and Activities

The Safety Division is responsible for developing, implementing and evaluating the effectiveness of programs designed to reduce traffic crashes and related fatalities, injuries and property damage.

Key Accomplishments

Data Analysis Section

The Data Analysis Section of the Safety Division is responsible for statistical analysis within the NDDOT including the Crash Reporting System which collects data from every law enforcement agency in North Dakota. The section is also responsible for research and statistical analysis of that crash data.

- Completed the annual *Crash Summary, Critical Crash Analysis* and the *NDDOT Construction Cost Index*.
- Provided crash mapping and analysis to various NDDOT customers.
- Processed paper crash reports.
- Upgraded 59 TraCS agencies to Version 10
- Added 10 agencies to electronic crash reporting (TraCS).
- 81 percent of crash reports are received electronically through TraCS.

Traffic Safety Office

The Traffic Safety Office is responsible for the administration of grant programs to change driver and passenger behaviors to reduce injuries and fatalities caused by motor vehicle crashes.

- Developed and coordinated the roll-out of eight Regional DUI Task Forces consisting of state, county and city law enforcement working jointly to conduct statewide, highly visible, sustained DUI enforcement to deter the problem of impaired driving in the state.

- Provided resources to law enforcement to increase the number of Drug Recognition Experts (DREs) in the state to improve the identification, arrest and prosecution of drug-impaired drivers
- Developed and aired several relevant traffic safety ads including:

- » **The Odds Are Against You.** To support the Regional DUI Task Forces, regional enforcement ads were developed depicting participating officers working en force to curb drunken driving with the message, "If you choose to drink and drive, the odds are against you."



- » **The Crash** depicts an unbelted teen driver involved in an intersection crash, which catapults him across the vehicle, causing him to strike and kill his younger sister who was a belted passenger in the pickup truck he was driving. The tagline, "Wear It For Them," gives the safety message about buckling up.
- » **The Kilde Ad** tells the true story of a North Dakota law enforcement officer whose mother was killed on her birthday by a drunken driver. The ad includes the real 911 call from the crash and is a heart-wrenching, real-life portrayal about drinking and driving. The 60-second television commercial can be viewed at the following link: <http://www.youtube.com/watch?v=mULGAUkB6ow&feature=related>

- Provided a grant to the North Dakota Driver and Traffic Safety Education Association (NDDTSEA) to tailor the driver's education curriculum used in the state of Oregon for use by driver's education programs in North Dakota. The curriculum moves beyond skills-based driver's education to include behavioral safety skills and parent education.
- Conducted a Driving Skills for Life (DSFL) program for teens. The event consisted of a ride and drive session conducted by the Highway Patrol's Emergency Vehicle Operator Course (EVOC) officers. The teens had the opportunity to drive through the course under normal conditions, while being distracted by sending and receiving text messages



A Driving Skills for Life ride and drive participant.

and finally while wearing goggles that simulated the sensation of impaired driving.

- » Once participants completed the ride and drive session, they went through a series of 12 traffic safety information, activity and photo opportunity stations. Participants received a silicon wristband with a safety message at each station they completed, giving them the opportunity to collect 13 different bracelets, each with a different safety message.
- » The program was made possible through a grant from the Governor's Highway Safety Association (GHSA) Ford Motor Company.



Teens also experienced the Seat Belt Convincer.

*The Office of
Project
Development
includes the
Bridge, Design,
Environmental
and Transportation
Services and
Materials and
Research Divisions.
The Office
Director is Ron
Henke. This office
is administered
by Grant Levi,
Deputy Director of
Engineering.*

Office of Project Development

Bridge

Terry Udland, Engineer

Responsibilities and Activities

Bridge Division's primary responsibilities include:

- Designing and preparing plans for construction and rehabilitation of state highway bridges.
- Inspecting bridges on state, county and city roads.
- Rating bridges for load-carrying capacity.
- Writing project concept reports.
- Writing hydraulic reports.
- Issuing drainage permits.

Based on need, Bridge Division is continuously planning and scheduling the rehabilitation and the replacement of the state's existing bridges.

Key Accomplishments

Bridge Division Design Section designed and prepared the plans for 12 new bridges/bridge widening, 12 new box culverts, 13 box culvert extensions and 44 sites of miscellaneous work (rail retrofits, approach slabs, deck overlays, bridge painting, and general maintenance).

Some of the new bridges are:

- Heart River, four miles west of Mandan.
- Square Butte Creek on ND Highway 1806, north of Mandan.
- Cedar Creek on ND Highway 8.
- Sterling Railroad Separation on US Highway 83.



New three-span railroad separation structure just east of existing structure at Sterling, ND. 9-22-11

Emergency repair plans were also prepared for the Mouse River Bridge on the US Highway 83 Bypass at Minot.

Also, the section continued to contribute to the construction of the Drayton Bridge Replacement Project.

Bridge Division's Structural Management Section processed over 6,000 bridge inspection reports through cooperation with the bridge inspectors from NDDOT's eight districts.

The section also rated new and existing bridges for load carrying capacity and, in conjunction with the ND Highway Patrol Permit Section, analyzed the bridges on routes for 4,368 movements in 2009 and 5,467 movement in 2010.

The Preliminary Engineering and Hydraulics Section provided the hydraulic analysis necessary for numerous grade raises on state highways and one grade raise on Interstate 94.

Storm sewer and drainage improvements were designed for the city of Ray and for West Fargo's Main Avenue. The oil activity in western North Dakota drove the need for improvements to state highways, which required the Section to perform the hydraulic design for numerous culverts. The section also issued an increasing number of drainage permits on highway right-of-way in western North Dakota and permitted several newly constructed Port of Entry facilities along the North Dakota/Canada border.

Design

Roger Weigel, Engineer

Responsibilities and Activities

The Design Division's primary responsibilities are to develop concept reports, plans and specifications for construction projects on the state and federal highway system, develop environmental documents and obtain federal approval, provide CAD support, prepare right of way plats, coordinate and conduct all aerial photographs and surveys, utility coordination on state highways, maintain design policies in the Design Manual, and provide technical support for design consultants.

Key Accomplishments:

Devils Lake Area Grade Raises

The Design Division has contributed to the continued efforts to raise and repair flood-damaged roads in the Devils Lake Basin. As waters continued to rise as a result of the 2009-2011 flood events, the department continued to develop plans for grade raises, including numerous locations on ND Highway 19, ND Highway 20, ND Highway 57, US Highway 281 and US Highway 2. Since the time the plans for raising the grades resulting from the 2009 event were developed, the National Weather Service predicted the lake level would continue to rise. Therefore, it was decided to pursue raising the grades even further, to an elevation of 1,465 feet above sea level to accommodate the new lake level predictions. The department worked with the FHWA for this approval and the Design Division provided information to help make the decision. The Design Division has prepared grade raise plans internally and worked

with consulting firms to prepare plans to accomplish the grade raise work that has been done and will continue into the future.

Emergency Work

As a result of record amounts of moisture during the past few years, a large amount of locations required emergency work. This included grade raises on state roadways, landslide repairs and preparations for and responses to flooding. During the biennium, Design Division staff, along with consulting firms under the direction of the Design Division, have completed, or are working on, the design of approximately 40 existing or potential permanent grade raise locations and eight landslide locations. These locations could be found throughout the state and impacted every one of the eight NDDOT districts. A large majority of the grade raise locations were in the prairie pothole region south of Jamestown, and the landslide activity was in the rugged terrain of the western part of the state. Emergency work must be completed in very compressed timeframes. In order to accomplish this, it required flexible and innovative approaches to the design process and constant communication with other divisions and agencies.

Statewide Base Map Project

September 2009, the NDDOT began working jointly with the Department of Emergency Services on the completion of a statewide base map. The NDDOT is responsible for the aerial imagery and roadway centerline data to create the base map. This includes planning the data collection, scheduling the flights,

gathering the aerial imagery, and processing the data to create a seamless map. The flights are flown at an altitude of 9,000 feet and result in sub-meter data accuracy. It was originally anticipated completing the project would require approximately three years. As of fall 2011 more than 60 percent of the aerial imagery has been photographed, putting that phase of the project ahead of schedule. The image processing and mosaicing portion of the project is not proceeding as rapidly. However, over time, lessons have been learned and the process is becoming more streamlined. The image data collected up to this point has also been utilized by other agencies, including the NDDOT and State Water Commission, for project planning and rudimentary surface modeling, enhancing the efficiency of these projects and allowing them to evolve much quicker. It is anticipated the final base map product and imagery, will be incorporated into the GIS Hub and be a valuable resource for many users.

Automated Machine Control

During this past biennium, the demand for electronic information for automated machine control increased significantly. Grading contractors use the electronic information produced from the survey and design to control their equipment when shaping the roadways. Their equipment is fitted with GPS receivers to allow for adjustments on the fly. Procedures are being developed to accommodate different types of software and requirements in the field. Last winter, contractors requested the electronic information prior to bidding. This information is currently provided as supplemental information but may be helpful to improve the competitiveness in the bidding process.

Major Urban Projects

The mill and overlay project on Bismarck Expressway was the first project identified as “significant” for work zone safety and mobility. Projects identified as such require a certain level of service to be maintained

to minimize impacts to the traveling public during construction. Various members from the NDDOT, FHWA, city of Bismarck, and industry collaborated to develop a plan. This plan included nighttime work and time limitations when closing intersections. The results of this project were successful. Designs for major urban reconstruction projects were developed for West Fargo Main (ND Highway 10) from 5th Street east to 45th Street Interchange, and Fargo 10th Street (US Highway 81) from 12th Avenue to 17th Avenue.

Projects in Oil Country

During the 2011 Legislative Session, over \$200 million in state funds were allocated to improve some of the highways being impacted by oil development. Highways targeted for these funds include ND Highway 8, ND Highway 22 and ND Highway 23 concentrated around central and western ND. Some of the projects were designed under very compressed schedules for 2011 construction. New methods were developed to create existing surfaces from aerial imagery to accommodate the short time line. Other major projects developed under the normal STIP process included US Highway 85 from Watford City to US Highway 2, and ND Highway 22 from the Ft. Berthold Indian Reservation boundary to New town. All of these projects included either passing lanes or lanes for the “super 2” concept.

Rumble Strips

The NDDOT is currently implementing a rumble strip program across North Dakota. Installation is progressing on many state and U.S. highways to help improve safety on North Dakota’s roadways. The Design Division completed extensive research on other state’s practices and completed a review of literature and studies available on the effectiveness and best design practices for rumble strips. Based on this information, Design revised existing standards and guidelines for the installation of centerline, edge

Environmental and Transportation Services

Mark Gaydos, Engineer

Responsibilities and Activities

The Environmental and Transportation Services Division provides support and allied services necessary to carry out the project development activities within the department. Activities are coordinated with highway and bridge design units to assure that projects are designed in a timely and cost effective manner

while maintaining appropriate sensitivity to environmental and cultural resource concerns and assuring that affected property owners are treated fairly in conformance with applicable state and federal laws and all applicable rules and regulations.

The division is comprised of five sections, which include: Environmental Services, Cultural Resource

Environmental and Transportation Services continued...

Services, Right of Way Services, Consultant Administration Services, and Technical Services.

Environmental Services

The environmental section provides guidance, procedures, and project documentation to assure proposed projects comply with the National Environmental Policy Act and other related federal and state laws and regulations.

The section performs wetlands services such as, delineations, development of mitigation sites and banks, and monitoring of mitigation sites and banks. In addition the section is responsible for tracking environmental commitments to ensure compliance for impacts related to highway construction projects. The section also completes the necessary project permitting associated with federal and state requirements.

Cultural Resource Services

The cultural resource section provides guidance, procedures, and project documentation to assure proposed projects comply with the National Historic Preservation Act and other related federal and state laws and regulations.

The section performs archaeological services, inventories, mitigation, and monitoring of historical sites, and monitoring of construction projects to ensure compliance. The section also provides tribal consultation, agency coordination, and completes the necessary project permitting associated with federal and state requirements.

Right of Way Services

The right of way section provides services related to the acquisition and management of all real properties necessary for highway purposes including, highway right of way, rest and recreation areas, and tracts of land necessary for the restoration, preservation, and enhancement of scenic beauty adjacent to the state highway system.

The section also administers the highway beautification program including outdoor advertising and junkyard control.

Consultant Administration Services

The consultant administration section performs solicitations for consulting engineers to perform preconstruction and construction engineering for NDDOT. The section interviews and negotiates with the consultants on the scope of work and contract fee.

In addition, the section processes payments for preconstruction engineering, maintains current status of preconstruction engineering contracts, maintains consultant expenditures, and compares these costs with the department's budget allocation for consultant services.

Technical Services

The technical services section develops the department's Standard Specifications for Road and Bridge Construction, Supplement Specifications, Special Provisions, Value Engineering for construction projects and other associated engineering studies.

Technical Services is the department's liaison with tribal governments on Tribal Employment Rights Ordinance (TERO) issues. The section develops and negotiates agreements with TERO offices for department projects on reservations.

Key Accomplishments:

July 1, 2009 to June 30, 2010

- Published "Bridges Across North Dakota" a book about North Dakota's historic and modern bridges. The book is available at the North Dakota Heritage Center Museum Store, visit www.history.nd.gov/museumstore, or call 701.328.2822, or email at museumstore@nd.gov
- Produced documentaries titled "Four Bears Bridge – Its History and Construction" and "Crossing the Water – An Oral History of the Four Bears."
- Developed a "Programmatic Agreement" that documents procedures for sinking box culverts below the water flow line to provide for wetland mitigation and fish passage.

July 1, 2010 to June 30, 2011

- Revised the "NDDOT Noise Policy and Guidance" to address new rules and regulations.
- Initiated a Stormwater Program to administer Nation Pollution Discharge Elimination System (NPDES), Stormwater Pollution Prevention Plan (SWPPP), Municipal Separate Storm Sewer System (MS4), and associated requirements for NDDOT construction activities
- Provided services and support for two record construction programs which included essential services from all sections within the division.

Materials and Research

Ron Horner, Engineer

Responsibilities and Activities

The Materials and Research Division's primary responsibility is assurance of the quality and economy of highway and bridge construction through the control of materials.

Five sections make up the division; Bituminous, Geotechnical, Gravel Prospecting, Testing Laboratory and Pavement Design and Research.

Following are highlights of each section's accomplishments during the 2009-2011 biennium.

Key Accomplishments

Bituminous Section

The Bituminous Section is responsible for testing liquid asphalt products used in the construction process. They are also responsible for specifications pertaining to asphalt, plan notes and construction procedures for asphalt paving.

In the past two years, they have worked with the Research Section on projects to incorporate a new process for paving that is called Warm Mix Asphalt (WMA). WMA has the potential environmental benefit of using less energy to create the mix due to lower heating temperatures required.

Geotechnical Section

The Geotechnical Section provides reports and recommendations for use in roadway grading, embankment construction and bridge construction. This includes conducting soil borings, field instrumentation and research of the materials and conditions.



Drilling in the Badlands

July 1, 2009 to June 30, 2010

- Field instrumentation and evaluation of surcharge loading on the Drayton and Sterling Bridge structures to determine when embankment had achieved allowable settlement and stability.
- Design a landslide remediation for the junction of US Highway 2 and US Highway 52.
- Hosted a workshop on "Intelligent Compaction" on US Highway 12 in Marmarth, ND. This included personnel from the industries, agencies, contractors and public.

July 1, 2010 to June 30, 2011

- Evaluated, investigated, designed and supported several landslides that occurred as a result of the extremely wet conditions of the winter/spring of 2011.



Landslide, US Highway 73, near Mandaree

- Evaluation and design of the Rose Coulee Structure embankment instability in Fargo. This includes the use of pervious cellular concrete in the embankment to provide a lightweight fill.
- The evaluation of several pipe backfill designs and installations on ND Highway 127 and US Highway 83.

Gravel Prospecting

The essential functions of the Gravel Prospecting section are to locate quality aggregate sources close to future highway construction projects, secure these sources by option and advertise this information through bidder's plans and proposals.

Testing Lab

The Testing Lab examines various materials used during the construction process including: aggregate, cement, soil, paint and glass beads. They serve as a materials testing resource throughout the state during the pre-construction and construction phases. They also maintain national accreditation for the testing laboratory.

- Testing Lab personnel worked with the concrete industry in the evaluation of new types of fly ash that may be used in North Dakota.
- Helped conduct the training within the Transportation Technician Certification Program, by providing instruction and demonstrating test procedure to personnel.
- Obtained, prepared, and distributed samples for the aggregate reference sample program, which is completed by NDDOT and industry.
- The chemistry lab has become fully accredited in cement testing using wavelength x-ray fluorescence and is running verification testing for all cements.
- Tested high volumes of materials throughout the lab, while meeting required dates.

Pavement Design and Research Section

The Pavement Design and Research Section's responsibilities include managing the research pro-

gram and providing pavement designs for highway rehabilitation and reconstruction projects.

Current activity in the oil producing regions of North Dakota and the inundation of several roads statewide caused by the current wet cycle, has put a strain on the state's transportation network. This has significantly increased the number pavement designs produced – many required in short time frames.

A number of research projects continue to be monitored, as well as many new projects over the last two years. A few ongoing and new projects are:

- Warm Mix Asphalt Pavements.
- Cement stabilization of soil/base layers for asphalt pavements.
- Collection of pavement surface profile data to support the Department's efforts to ensure that contractors construct smooth, long lasting pavements.
- Collection Falling Weight Deflectometer (FWD), for pavement and subgrade strength data in support of NDDOT District efforts to administer springtime load restrictions.
- Conduct research studies to evaluate the performance of wet-reflective elements used in durable pavement markings.

*The Office of
Operations includes
the Civil Rights,
Construction
Services and
Maintenance
Divisions. The
Office Director is
Darcy Rosendahl.
This office is
administered
by Grant Levi,
Deputy Director of
Engineering.*

Office of Operations

Civil Rights

Deb Igoe, Director

Responsibilities and Activities

NDDOT is committed to eliminating unlawful discrimination in its state, federal and federally-assisted programs on the basis of race, color, national origin, religion, sex, age, physical or mental handicap or disability, genetics, income status, political opinion or affiliation, status with regard to marriage or public assistance, or participation in lawful activity off NDDOT's premises during non-working hours which is not in direct conflict with the essential business-related interests of the department. In addition, NDDOT ensures that all beneficiaries and potential beneficiaries of these programs are offered an equal participation opportunity. The Department also protects the civil rights of its employees and applicants for employment. The Civil Rights Division has the responsibility for developing, implement and monitoring the following seven programs:

Disadvantaged Business Enterprise Program (DBE)

This program is responsible for certification of minority, female, and other socially and economically disadvantaged owned businesses under the rules and regulations of the federal DBE guidelines. The DBE program encourages the development and use of companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals on federally-aided highway construction projects. The companies can be contractors, suppliers, or manufacturers with capabilities in the transportation industry. At the end of FY 2010, NDDOT certified nine new businesses for a total of 83 DBEs. At the end of FY 2011, 14 new businesses were certified in the DBE program, bringing the total to 86.

To participate in the program, the companies must be annually certified by the NDDOT. Under the DBE Program, select contracts are assigned percentage goals, based on the potential for DBE participation, type of work, location and total dollar amount of the contract. The prime contractor must meet the assigned DBE project goal or prove sufficient good faith efforts were made to meet the goal. NDDOT awarded \$26 million to DBE contractors in FY 2010 and \$5 million in FY 2011.

DBE/OJT Supportive Services

NDDOT provides technical assistance and support to companies owned and controlled by minorities, women, and socially and economically disadvantaged individuals with capabilities in the transportation industry. This technical assistance is in the area of DBE certification, bidding, bonding, bookkeeping, loans, contract procurement, etc. This allows DBE firms to enhance their capabilities, to make them competitive in the project bid process and to increase their overall effectiveness. Currently the DBE supportive services consultant is Agency MABU, who is also certified by NDDOT as a DBE.

In addition, the NDDOT provides counseling services to target on-the-job trainees (OJT) on highway construction projects and to monitor their progress under the program. NDDOT contracts with a consultant to provide this assistance and these services. Currently, the OJT supportive services consultant is Wold Engineering, P.C.

EEO Contractor Compliance Review Program

This program ensures that federal aid highway construction projects, valued at more than \$10,000, include minority and female employees on construction crews. Contractors report their achievements annually. For 2010, there were a total of 2,788 employees working in highway construction. Of these employees, there were 222 minority males, representing 7.96 percent of the total workforce and 204 females, representing 7.31 percent. For 2011, a total of 3,032 employees worked in highway construction. Of these employees, there were 286 minority males, representing 9.43 percent of the total workforce and 202 females, representing 6.66 percent.

Contractors with federally-funded highway construction contracts must also comply with the requirements of the Civil Rights Act of 1964, as amended and the related contract special provisions regarding equal employment opportunity, disadvantaged business enterprise utilization and on-the-job training. Formal compliance reviews document contractor efforts. If any deficiencies are found during the audit, the Civil Rights Division makes recommendations for corrective action. Under this program, the Civil Rights Division conducts in-depth audits on eight to 10 contractors each year. The division conducted 10 in-depth audits in 2010; and five audits with the program not yet completed in 2011.

EEO On-The-Job Training Program

This program provides training for minority, female and economically disadvantaged individuals in the skilled craft classifications used by contractors on highway construction projects. Contractors are assigned trainees based on the total amount of federal aid work they receive each season. The contractors may choose to train equipment operators, truck drivers, or other skilled craft workers. Training programs run from 350 hours to 550 hours in length. Annually, highway construction contractors must provide on-the-job training to anywhere from 20 to 30 qualified individuals. For 2010, there was a goal of 20 trainees, 45 were assigned and 20 graduated from the program. For 2011, there is a goal of 20 trainees; 43 have been assigned and, with the program not completed, five have graduated.

Labor Compliance Program

This program ensures that Davis-Bacon wage rates and fringe benefits are paid to highway construction workers on federal-aid contracts valued at more than \$2,000 and subsequent subcontracts. Certified payroll monitoring and a formal complaint process document contractor compliance. All federally funded highway construction contracts are subject to the federal Davis-Bacon and related Acts. The U.S. Department of Labor has empowered NDDOT to enforce all pertinent labor laws pertaining to Davis-Bacon wage rates, overtime, fringe benefits, payrolls, etc. Any contractor employee who feels he or she has not been properly paid may file a wage rate complaint with NDDOT. The Civil Rights Division investigates the complaint and recovers any back-wages found due.

Title VI and Nondiscrimination Program

This program ensures that all programs, activities and services offered to the general public by NDDOT are free from discrimination. Under Title VI of the Civil Rights Act of 1964 and its related statutes and regulations no person or groups of persons shall on the grounds of race, color, national origin, sex, age, disability/handicap, or income status, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any and all programs, services, or activities administered by NDDOT, its recipients, sub-recipients and contractors.

Title VII (Internal EEO) Program

This program ensures that the recruitment and selection of regular and temporary employees for NDDOT is done in a discrimination-free manner and that the work environment is free of discrimination. It also includes procedures for investigating discrimination complaints. EEO training of all NDDOT employees is part of Title VII of the Civil Rights Act of 1964. Title VII and its related statutes and regulations protects employees from discrimination and harassment based on race, color, religion, sex, age, national origin, physical or mental handicap or disability, and genetics in all phases of employment. Title VII applies to employees and relates only to employment issues.

Construction Services

Cal J. Gendreau, Director

Responsibilities and Activities

The Construction Services Division administers highway construction contracts. The division is responsible for highway construction bid openings, contracts, bonds and contract payments. The division provides services in contractor pre-qualifications, construction scheduling, engineering reviews, contractor claims, project staffing, Civil Rights liaison for DBE and Title VI programs, construction records, engineering equipment and various other services.

The Construction Services Division activities can be consolidated into five key operational functions. They are:

- Bid Openings and Contract Payments.
- Contract Services.
- Records Management.

- Construction Services.
- Administrative Support Services.

Key Accomplishments

Internet bidding and bid openings

The department began using internet bidding in 2004. In 2008, the department began posting highway construction plans and bidder information on the NDDOT Web site. Internet bidding has grown in popularity and allows the department to post bid results very quickly on the NDDOT Web site. In January of 2010, the department discontinued the reading of bids aloud at the bid openings which allowed the bid results to be posted more quickly and efficiently. See below for a screen shot of the Web-based bidding information.

[Travel](#) [Public](#) [Business](#) [Government](#)

Bid Opening Electronic Plans and Proposals

Welcome to the North Dakota Department of Transportation's Electronic Plans and Proposals page. Here you can view bid opening files online or you can save the files to your computer. Clicking on the document links below will access a document.

Notice for Expedite Users

- [Expedite 5.9A Upgrade Notice PDF](#) - 9/09/2010
- [Expedite 5.9A Bid Program Download link](#)

Select a Bid Opening Date:

Bid Opening Date - September 12, 2011 9:30 AM CT

Resources

- [Sign up to Receive Notice to Bidders email notification](#)
- [Why sign up for the Notice to Bidders? Click here to find out.](#)
- [Plan Holders List](#)

Reports

- [Apparent Low Bidders](#)
- [Engineers Estimate](#)

Job 1 - SER-5-094(092)030
Type: MEDIAN CROSSEOVER
Location: BILLINGS CO; I 94 FROM RP 31 EAST OF MEDORA TO RP 32 PAINTED CANYON

Document	File Size	Date Added
ADDENDUM 1 - Job 01	109.9 KB	September 8, 2011
Job 01 Proposal	3.2 MB	September 6, 2011
SER-5-094(092)030_Final_ED	11.8 MB	September 6, 2011

This computer screen image displays NDDOT's Web-based electronic bidding information.

Record Contracts Awarded

This biennium has set yet another record for the amount of work the NDDOT has completed. The department had a record number of regularly scheduled improvement projects in addition to stimulus and emergency relief projects. This established an unprecedented amount of work for this biennium. Our employees did an amazing job administering this work. The total contractor payments for the biennium are as follows:

- July 2009 – June 2010 Contractor Payments: \$326,053,875.
- July 2010 – June 2011 Contractor Payments: \$395,961,188.

Prequalified Contractors

During the 2009-2011 biennium, 250 contractors were prequalified each year to bid on NDDOT projects.

Maintenance

Brad Darr, Engineer

Responsibilities and Activities

The Maintenance Division is responsible for NDDOT property and facilities; safety, health and emergency responses; Emergency Relief for state highways, budgeting for maintenance operations, capital improvements, equipment, pavement marking, maintenance specifications; the pavement preservation program; Roadway Weather Information System (RWIS); static traffic control devices; Intelligent Transportation Systems (ITS); and load restriction and road condition reports.

Key Accomplishments

Job Safety Analysis/Job Hazard Analysis (JSA/JHA)

Safety is paramount to NDDOT and the Maintenance Division is responsible for a variety of safety-related topics, including a review of employee accidents, an employee safety program and health services and workers compensation claims. To further reduce injuries and accidents JSA/JHA principles have been introduced and are being implemented.

Capital Improvements

Buildings that were funded in this biennium include; Bottineau and Wishek section building, Jamestown and Valley City salt buildings and 35 salt sheds constructed with our own labor. Repairs were made to the Minot and Bismarck Shops.

Intelligent Transportation Systems (ITS)

ITS improves transportation safety and mobility and enhances productivity through the use of advanced information and communications technologies. ITS technologies assist the Maintenance Division in providing better information to the traveling public. The division's ITS activities include coordinating the

development and deployment of roadway weather information. This includes managing federal ITS grants and projects, providing technical assistance to the districts and developing ITS equipment specifications. The Maintenance Division is responsible for collecting and disseminating roadway and weather information. This information is provided to the general public via the Internet and the North Dakota 511 Travel Information Service and Dynamic Message



systems (DMS). The Maintenance Division oversees a pilot project using AVL and data collection equipment. The project is intended to improve the efficiencies and safety of the traveling public during snow and ice control operations. Seven permanent Dynamic Message Systems were installed to better inform the public of Amber Alerts as well as travel alerts, no travel advisories and road closures.

Emergency Response Efforts

The department has committed the use of its equipment fleet and personnel to assist in responding to emergencies such as flooded highways due to excessive snow fall and spring run-off, to other agencies and local governments. The Maintenance Division coordinates the response effort with the North Dakota Department of Emergency Services (DES).

During this biennium, 90 Detailed Damage Inspection Reports were completed for approximately \$250 million in damages to the state system.

Maintenance Decision Support System (MDSS) and Automated Vehicle Location System (AVL)

The department is active in implementing MDSS. Several states joined together to form a pooled-fund study to jump-start this project, which will continue into the next biennium. The study is being coordinated with the automated vehicle location and data collection project, which is intended to provide maintenance operators with up-to-date weather information, equipment coordination during adverse weather and best maintenance strategies to combat poor road conditions caused by the weather.

Equipment

The Maintenance Division continues to pursue equipment that will make the department more efficient and effective. The department has recently purchased two TowPlows, which are operating in the Bismarck and Fargo areas.



TowPlow

The Office of Transportation Programs includes the Local Government, Planning/Asset Management and Programming Divisions. The Office Director is Bob Fode. This office is administered by Grant Levi, Deputy Director of Engineering.

Office of Transportation Programs

Local Government

Paul M. Benning, Engineer

Responsibilities and Activities

The Local Government Division administers, coordinates and allocates funds for all county, urban, Transportation Enhancement, Safe Routes to School, and transit federal aid programs and projects. Local Government also provides a liaison between the Federal Highway Administration, county and city officials, and NDDOT divisions and districts during project development. Local Government also assists local entities in getting their projects ready for bid openings, and coordinates the Emergency Relief program on a statewide basis on behalf of NDDOT.

Key Accomplishments

County Projects

The Thompson Bridge, located in North Dakota's Grand Forks County and Minnesota's Polk County, spans the Red River and was replaced with a new structure during the 2009-2010 construction season. This vital link handles large volumes of truck traffic hauling sugar beets and other commodities across the Red River. The new bridge replaced a structurally deficient and functionally obsolete bridge. This bridge was replaced earlier than anticipated with the help of American Recovery and Reinvestment Act (ARRA) funds.



Thompson Bridge was replaced in 2010.

Urban Projects

West Fargo Main Avenue (6th Street West to 5th Street East) was built in the 2009 construction season. The goal of the project was to improve how this segment of roadway operated and also improve and upgrade the roadway corridor to meet both current and future traffic demands and create a safe corridor that was also pedestrian friendly. The project consisted of rebuilding the roadway with concrete, replacing the storm sewer, traffic signals, street lights, and adding a pedestrian facility. The city also replaced their water lines and sewer lines at 100 percent local costs.

Stanley ND Highway 8 - Main Street (Railroad Avenue to 6th Avenue SE) was built in the 2010 construction season. The goal of the project was to improve the roadway, curb and gutter, storm sewer, driveways, sidewalk, lighting and replace a sanitary sewer line on Main Street in Stanley.

Transportation Enhancement Project

The Bismarck-Mandan Liberty Memorial Bridge parks were built in the 2010 construction season. The parks sit on the east and west sides of the bridge and are dedicated to military veterans. The park areas overlook the Missouri River and showcase the history of the old bridge. These parks were built to symbolize the freedom that all military service men and women are currently serving and those who have served in the past.

Safe Routes to School (SRTS)

The small progressive city of Milnor received SRTS funds in the amount of \$129,350 for infrastructure and

\$1,650 for non-infrastructure. The infrastructure project was built in the 2010 construction season, and replaced sidewalks, school signs and crosswalk markings. They also added ADA ramps and installed new bike racks at the schools. They used non-infrastructure funds to sponsor a community bike rodeo and distributed bicycle helmets to the children attending.

Transit Projects

Six bus storage facilities, for rural, public transit, were built throughout the state starting in 2009-2010. The bus storage facilities were built in Valley City, Minot, Williston, Dickinson, Watford City and Rolla. The purpose of the bus storage facilities was to house para-transit buses currently stored outdoors to protect their electronic components and extend the life of the vehicle. The cost of these six bus storage facilities was approximately \$6 million.

Planning/Asset Management

Scott Zainhofsky, Engineer

Responsibilities and Activities

This division is one of two divisions formed when the Planning and Programming Division was split, in December 2010, to provide greater focus on strategic initiatives for division leadership.

In support of NDDOT's efforts to, "provide a transportation system that safely moves people and goods," the Planning/Asset Management Division strives to serve the needs of NDDOT by providing the highest quality information and analyses, in the most efficient and timely manner the available resources will allow. By providing long-range and system-level visioning, planning and leadership, the division's diverse functions and work products support the department's strategic and investment decision-making processes through data collection, data management and analysis.

The division is responsible for transportation-planning and engineering-management programs, including (but not limited to):

- Statewide transportation planning and special studies:
 - » Maintaining the strategic transportation plan (currently, TransAction II).
 - » Providing technical planning assistance to local units of government.

- » Highway planning needs and levels-of-service studies.
- » Transportation policy planning.
- » Maintaining the Highway Performance Classification System.
- » Assessing transportation impacts of various economic sectors.
- Railroad planning and programs:
 - » Statewide rail plan.
 - » Railroad/highway crossing signals, closures and surfacing improvements.
 - » Rail loan and quiet zone programs.
- Mapping services (e.g. county base maps, highway/tourist map, et al.).
- Traffic data collection and analysis.
- Transportation and roadway data collection and analysis.
- Department-wide asset management, including modeling:
 - » The current and predicted condition of the state highway system.
 - » Highway system funding needs.

Planning/Asset Management continued...

- » Level of service that can be provided based on budgetary limitations.
- » The effects of budgetary tradeoffs between numerous department assets.
- Pavement performance evaluation and condition survey.
- Department engineering-divisions performance management program (i.e. performance measures, goal setting, outcome reporting, etc.).

Key Accomplishments

Over the last two years, the sections, now comprising this division:

- Secured a \$14.13 million TIGER II grant for the Minot northeast bypass project.
- Developed and refined a nationally innovative model to predict the amount of oil development heavy-truck traffic to feed the pavement design and project-programming processes.

- Refined the traffic counting program by realigning the counting regions to coincide with the state's economic regions, by developing a plan to systematically upgrade the department's permanently installed automatic traffic counters, and by acquiring video survey units to increase the efficiency of performing intersection turning-movement counts.
- Developed the state funded (2011 Legislative Session) process and program for the counties, as a group, to prioritize the rural local system roadway projects in the state's oil producing region.
- Supported the statewide flood response efforts through the development of numerous maps and special roadway condition data collection efforts.
- Became the first agency in the nation to submit the federally required Highway Performance Monitoring System (HPMS) data, under the new 2010 program and process. This action received national accolades from the Federal Highway Administration (FHWA).

Programming

Steve Salwei

Responsibilities and Activities

The Programming Division's major responsibilities are project authorization and development. This include preparing the Statewide Transportation Improvement Program (STIP), monitoring project development, preparing and assembling contract proposals and documents for all bid openings and programming and monitoring federal aid funds for all state and local projects.

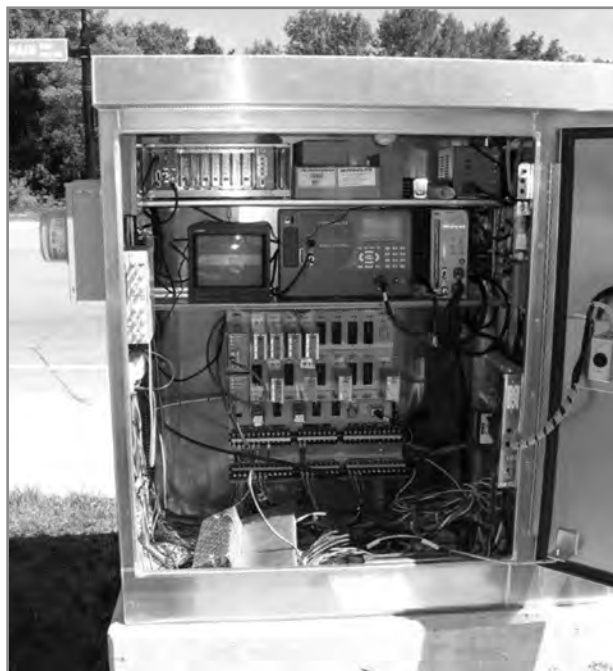
Key Accomplishments

The Programming Division processed 497 regular federal aid projects totaling over \$529 million of federal funds and 232 Emergency Relief (ER) projects totaling over \$190 Million dollars of federal funds. This was approximately a 20 percent increase over the number of projects that were processed in the previous biennium.

Traffic Operations Section

The Traffic Operations Section responded to approximately 270 various requests related to signing, pavement marking, traffic control, highway geometry, and highway safety. The section also completed traffic operations studies for all major reconstruction projects, provided requested crash information, reviewed and commented on design plans, project

concept reports, and consultant traffic operations studies. Field work included traffic signal inspections of 31 new intersection installations and annual maintenance of the 39 state-maintained signals.



Traffic Signal Controller Cabinet, Main Avenue and Sheyenne Street, West Fargo.

The Traffic Operations Section expanded its use of Synchro software to model traffic flow through signalized roadway networks. Capacity analysis, signal timing studies and work zone safety mobility traffic modeling can now be completed. Analysis of traffic control alternatives such as yield signs, stop signs, roundabouts, traffic signals (coordinated or non-coordinated) on project corridors, intersections and interchanges is now much more efficient.

Traffic operations improved the Highway Safety Improvement Program process by creating a database and a new project request form. The database keeps track of all safety project requests and is used to report the annual program of safety projects. The new form improves the project solicitation process. Districts, cities, or tribal entities can complete the form to request potential safety projects.

In the fall of 2009, crash data was converted to latitude-longitude coordinates. This conversion makes it easier to identify crashes within a study area, plot crashes on aerial maps, efficiently prepare crash location listings, and perform geospatial analysis to link crash and roadway data. Also, after the conversion, new crash summary sheets were

developed containing statistics to help easily identify crash trends.

Scoping Section

Project scoping is the process used to identify transportation needs and to establish the appropriate measures to address them. This involves determining the current condition of roadway, setting the physical limits of the project, developing possible solutions to address the need with an anticipated project schedule, providing accurate project costs for each solution, and choosing the appropriate solution(s) to be moved forward in the project development phase.

The purpose of project scoping is to obtain information aiding in delivering the most economical solution, produce accurate cost estimates used in the development of the STIP, and developing project guidelines to avoid major changes throughout the project development.

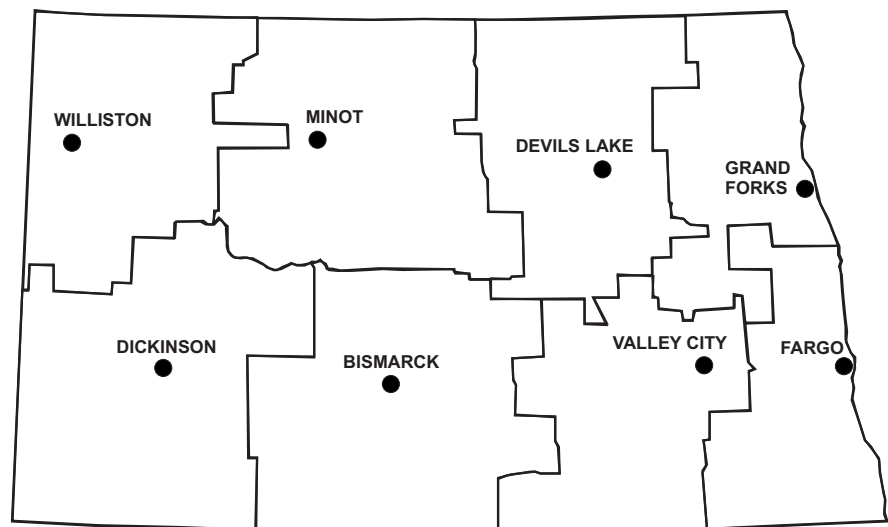
The Scoping Section reviews approximately 1,140 lane-miles of interstate highways and 840 miles of interregional highways. On average, 50 projects are scoped each year.

*Included here
are all eight
district offices in
North Dakota's
transportation
system. The
districts are
administered
by Grant Levi,
Deputy Director of
Engineering.*

District Overview

Responsibilities and Activities

North Dakota's transportation system is divided among eight regional districts. The district engineer is responsible for all the construction and maintenance activities in their designated region. District construction activities include monitoring the conditions of bridges and roadways to determine which roadways should receive the highest priority for reconstruction based on need and available funding. The district then works with the appropriate divisions in the Central Office to establish short- and long-term construction programming of the projects. Planning and design of individual projects is a joint effort with the appropriate divisions within the department. The contract administration of the projects is then handled by the district construction staff.



Maintenance activities consist of roadway and non-roadway maintenance. Included in the roadway activities are crack sealing, blade patching, seal coats and snow and ice control activities. Non-roadway maintenance activities include the issuing of utility permits, drive permits, the Adopt-A-Highway program, the interstate haying program, the noxious weed program, the billboard program and dealing with all other right of way issues.

The districts also have a partnership with cities and counties to work together on transportation issues. Included in this process is the bridge inspection program in which district personnel inspect the bridges for these entities.

Bismarck District

Kevin Levi, Engineer

Responsibilities and Activities

The Bismarck District is located in the south central part of the state and lies in nearly even halves on either side of the Missouri River. Of the 2,800 lane miles, 445 are on the interstate system and 2,355 are on the state highway system. The district staff consists of 99 full-time employees, which is supplemented with approximately five temporary employees for summertime construction and maintenance activities.

Key Accomplishments

During this past biennium, the district has had a very active construction and maintenance program.

Near record snowfalls the past few seasons have required constant maintenance activities in order to keep the roadways open for the public. In addition to near record snowfall, above average summer rains have created several areas throughout the district where water levels rose high enough to inundate roadways and required emergency grade raises in order to keep them open.

Spring of 2011 created one of the greatest challenges the communities of Bismarck and Mandan have faced since the construction of the Garrison Dam in the early 1950s. Water elevations on the Missouri River rose to historic flood levels due to excessive snow and rain in the basin. In addition to nearly the entire staff in the Bismarck District, every district in the state sent workers and/or equipment to aide in the flood fighting efforts.



NDDOT district employees from around the state brought DOT trucks to Bismarck and hauled dirt used for building dikes.

Major construction projects completed in 2009

- Reconstruction of a 2.1-mile segment of ND Highway 1804 from east of Desert Road, north

to Signal Street. This project provided a new hot bituminous pavement roadway surface along with geometric improvements, wider shoulders and turn lanes at major intersections.

- A Full-Depth Reclamation (FDR) with hot bituminous pavement project was completed on a 7.6-mile segment of ND Highway 3 from the Burnstad Junction north to the ND Highway 34 Junction north of Napoleon. This is the second FDR project that has been constructed in the Bismarck District.
- A blended base with hot bituminous pavement project was completed on a 16.7-mile segment of US Highway 83 from Linton north to the Junction of ND Highway 34 at Hazelton.
- The Expressway Bridge between Bismarck and Mandan received a deck overlay along with new expansion joints.

Major construction projects completed in 2010

- A hot bituminous overlay along with a microsurfacing project was completed on the eastbound and westbound lanes of Interstate 94, Interstate 194 and ND Highway 810 between the communities of Bismarck and Mandan. The primary contractor elected to do a portion of the paving at night on segments of the project due to high traffic volumes.
- A mill and hot bituminous pavement project was completed on a 15.6-mile segment of I-94 for both the eastbound and westbound lanes between the Burleigh/Kidder county line and Dawson.
- The Liberty Memorial Bridge landscaping project was completed on both the Bismarck and Mandan sides of the Missouri River.
- The beginning phase of a two-year structure replacement project was completed on US Highway 83 at the Sterling railroad separation. This phase of the project built a portion of the embankment along with a five-foot surcharge on top in order to expedite settlement issues prior to construction of the new bridge.

Regular preventive maintenance on all roadways is an ongoing activity for the district. These activities consist of attempting to seal coat the district roads on a seven-year cycle, contract patching the segments of roadway that show distress from the traffic, and using the "Mini Mac" to help reduce the impacts from depressed transverse cracks prior to overlay projects. Microsurfacing and slurry seals have proved to be a cost-effective solution on high-volume roadways.

Devils Lake District

Wayde Swenson, Engineer

Responsibilities and Activities

The Devils Lake District administers, constructs and maintains approximately 1,150 lane-miles of state highways located in the north central part of the state. The district is staffed by 71 full-time administration, construction, maintenance and shop employees. The administration, construction and shop staff are located at district headquarters in Devils Lake. Maintenance Section staff are located throughout the district and are responsible for maintenance and snow and ice control of specific highway sections. The district staff monitors road and bridge conditions to determine construction and maintenance needs. The district also prioritizes construction projects and provides input into the planning, location, design and construction of the projects.

The district also monitors the construction of federal aid street projects within the city of Devils Lake and the construction of federal aid roadway projects in the following counties; Benson, Cavalier, Eddy, Foster, Pierce, Ramsey, Rolette, Towner and Wells.

Key Accomplishments

2009

- The district constructed approximately 62 miles of HBP overlays, 24 miles of concrete repair on US Highway 2 and reconstructed US Highway 52 in the city of Carrington.
- The district with its maintenance forces constructed 60-foot by 60-foot salt shed buildings at the Carrington, Cando and Rolla Sections.
- The district provided input to the Central Office and consultants on the preliminary engineering and design of grade raise projects on ND Highway 19, ND Highway 20, ND Highway 57 and US Highway 281.

2010

- The district constructed approximately 164 miles of HBP overlays and 15 miles of concrete repair on US Highway 2.
- ND Highway 20 at Spring Lake was let in April at a cost of approximately \$13 million. The project was bid as a two-year project and the contractor was able to complete it in one year.
- The ND Highway 57 grade raise project was let in June at a cost of approximately \$30 million.

- The ND Highway 20 grade raise and Road Acting as Dam project was let in July at a cost of approximately \$56 million. It was the largest project ever let by the NDDOT.
- There were three grade raise projects let in August on ND Highway 19 at a cost of approximately \$27 million.
- The US Highway 281 grade raise project was let in October at a cost of approximately \$12 million.

2011

- The district put together plans for approximately 91 miles of HBP overlays constructed in 2011.
- The district designed and constructed five emergency grade raise projects located on:
 - » ND Highway 15 east of New Rockford.
 - » ND Highway 30 near Harlow.
 - » ND Highway 20 near McHenry.
 - » ND Highway 200 near Hurdsfield.
 - » US Highway 2 west of Penn.
- The US Highway 2 grade raise project was let in April with an approximate cost of \$ 9 million.
- The ND Highway 19 grade raise project was let in May with an approximate cost of \$ 5 million. This project included the raise of the city dike at ND Highway 19.

All grade projects bid in 2010 and 2011, except ND Highway 20 at Spring Lake, were ongoing at the end of the biennium. The department is working on getting the projects to the ultimate elevation of 1,465 feet above sea level.

The Devils Lake District has experienced numerous grade-raise projects to stay ahead of rising Devils Lake. Due to the amount road and dike work occurring around the Devils Lake region, the state highways have been impacted by the amount of material being hauled on them. Borrow sites are located near the projects, but rock, sand and gravel are coming from areas located throughout the district.

The challenge for the next biennium is to stay ahead of the rising water and get the roadways on Devils Lake to their ultimate elevation. Also, the wet cycle has caused pothole sloughs in the district to fill and encroach onto state highways. If the wet cycle continues more emergency grade raises will be needed to keep the highways open at those locations.

Dickinson District

Larry Gangl, Engineer

Responsibilities and Activities

The Dickinson District is responsible for the maintenance on 1,978 lane miles of roadway on the interstate and state highway systems. The district has 61 full-time employees.

Key Accomplishments

The Dickinson District had several key accomplishments over the past biennium. The district invested \$55 million in improvements to the state highways in southwestern North Dakota. Some of these projects include; resurfacing and safety improvements on Interstate 94 from the district boundary to near Richardton, reconstruction of US Highway 12 from the Montana state line to east of Marmarth and resurfacing US Highway 85 from Belfield north to Grassy Butte.

July 1, 2009 to June 30, 2010

- Assisted in the tornado cleanup in Dickinson.
- Completed \$39 million in upgrades on the state highway system in the district.
- Completed the construction of a new section building in Beulah.

July 1, 2010 to June 30, 2011

- Reconstruction of Interstate 94 from the district boundary to near Richardton westbound.
- Completed \$16 million in upgrades on the state highway system in the district.
- Completed salt storage facilities in several sections (Belfield, Mott, Beulah and Bowman).

District construction crews administered several large construction contracts. The design of all seal coats and thin lift overlays were completed by district construction staff.

District maintenance crews completed 1,200 lane miles of crack pouring and repaired depressed transverse cracks on 220 lane miles of roadways. These processes are an excellent preventative maintenance strategy to increase the service life of state roadways.

The district continues to use automatic vehicle location systems with cameras to improve winter snow and ice control service levels.

Fargo District

Bob Walton, Engineer

Responsibilities and Activities

The Fargo District is located in the southeastern part of the state, and is responsible for 1,817 lane miles of roadway. The district has 86 full-time employees assigned in four sections: highway engineering, roadway maintenance, vehicle maintenance, and administration.

Key accomplishments

In the first year of the 2009-2011 biennium, the Fargo District had a successful construction season despite a late spring, wet summer, and tight timeframes due to late bid dates. Maintenance was extremely busy assisting in the recovery from a record spring flood, and also implemented 24-hour winter snow and ice control coverage in the metropolitan area starting in 2009-2010. This coverage was found to be a big success in reacting to Highway Patrol and public's late night and early morning needs.

In 2009, construction staff took on a challenging construction program focused primarily in the Fargo West

Fargo area. The projects included Fargo - 12th Avenue North (Interstate 29 to 10th Street), completing the new Interstate 94/Veterans Boulevard interchange, and constructing segment 1 of the West Fargo - Main Avenue project focused on the downtown area.



Fargo 12th Avenue North viaduct which was widened from two lanes to four lanes and is the gateway to NDSU campus.

Intelligent Transportation Systems continued to be developed. Continued coordination with the city of Fargo occurred with interconnecting traffic signals and video camera systems to improve traffic flows and reduce travel delay. Fargo began to work with Moorhead, Minnesota, and Mn/DOT to interconnect across state lines.

In the second year of the biennium, the Fargo District construction season started with many complicated construction projects such as Interstate 29 approach panel lifting in Fargo (Main Avenue to Interstate 94), northbound Interstate 29 reconstruction from Fargo to Argusville, Fargo 10th Street underpass rehabilitation, Interstate 94/45th Street interchange widening and reconstruction, Wahpeton's reconstruction of Dakota Avenue, and the ND Highway 127 blended base project south of Wahpeton in the heart of sugar beet county.

The winter of 2010-2011 was a difficult winter marked by heavy snowfall, six closures of interstates, and a New Years Eve storm which stranded over 100 vehicles on Interstate 94 and over 40 vehicles on Interstate 29. District plows escorted law enforcement to stranded motorists and cleared the way for emergency vehicles for two days. NDDOT plow



The Dakota Avenue project in Wahpeton.

drivers individually rescued 32 people in addition to those law enforcement assisted. The snow and already saturated soils contributed to another spring flood which maintenance forces reacted to over 30 different highway flooding sites in the spring of 2011.

District Maintenance sections in Forman, Lidgerwood, Casselton and Hillsboro were upgraded with 60' x 60' salt sheds. District maintenance staff provided all labor to construct the buildings.

Grand Forks District

Les Noehre, Engineer

Responsibilities and Activities

The Grand Forks District is responsible for the construction, maintenance, snow and ice control, and roadway appurtenances on 990 miles of state highways, plus all the associated equipment and personnel to accomplish those tasks.

Key Accomplishments

Maintenance

The 2009-2011 biennium for the Grand Forks District Maintenance forces performed highway maintenance procedures required to extend the life of our roads. Our forces performed routine crack repairs using traditional methods: crack pouring, patching with hot mix, sealing. We also use scotch patching, extensively for the repair of broken or badly cracked pavement as an effective maintenance tool. In addition to the tools mentioned, the Grand Forks District uses the Minimac as much as possible within the time constraints of the machine being shared with another district. We use the machine primarily for depressed

cracks as a method to improve ride and crack seal for stand-alone maintenance.

Other accomplishments for the district include continued drainage repairs and following the state and district mowing and tree removal policies in order to improve the appearance and safety of our highways. A major effort along Interstate 29 within the city of Grand Forks was performed as part of the attempt to improve the aesthetics along the highway. We continue to clean and reset culverts as needed along our highways with several major culvert separation repairs on US Highway 2, ND Highway 15 and ND Highway 17. As an added attempt to preserve our pavement and lessen the reoccurrence of frost boils, drain tile is installed by our maintenance forces where natural springs have created pavement heaving and road breakups with great success. Locations where drain tile was used include ND Highway 200, ND Highway 18, Interstate 29, and US Highway 2.

Snow and ice removal operations were extensive during the last two winters with little respite between snow events. Maintenance forces worked long hours,

and most weeks without breaks, to ensure traffic safety and travel.

Major flooding within the district in 2010 began before the end of winter snowfall and added extensively to the workload. During 2010, Interstate 29 was kept open by the use of 24 hour flagging operations and snowplows used to clear the highway of ice and debris. Maintenance forces were busy throughout the district monitoring overland flooding of our highways, ensuring roads were safely open for travel. During the late spring of 2011, we again encountered a severe flood which temporarily closed a portion of Interstate 29. In order to keep traffic flowing north and south, a detour using alternate highways were used from Exit 152 to Exit 176. Within a week of closing a portion of Interstate 29, the district was able to reopen the entire interstate with the aid of the placement of Water Inflated Property Protectors to dam back flood waters along the interstate shoulder and the use of flagging operations. Thus, during both years with major flooding, there was minimal impact to interstate travel. Other highways were closed or open to local traffic only during the 2010 and 2011 floods and were reopened as soon as possible.

A significant accomplishment for 2011 was the new Drayton Bridge crossing from North Dakota to Minnesota on ND Highway 66. The new bridge allowed access between the two states which in the past was normally closed during major floods.



Drayton-Robbin Bridges. The existing cantilevered Warren through truss bridge, which spanned 1,028 feet in length (right), was replaced with a 37-span bridge consisting of both concrete I-beams and steel girders that spans 4,090 feet in length (left). The new bridge was opened to traffic on October 22, 2010.

In addition, the district supplied assistance in the form of equipment and personnel to assist both Bismarck and Minot in their flood fighting during 2011.

At various times, over 85 percent of the district's maintenance personnel mobilized to Bismarck and Minot building temporary dikes.

Other accomplishments for the district are, the construction of four new salt sheds that were constructed using district maintenance forces as a labor cost saving initiative. The buildings are located the Larimore Section, Michigan Section, Cavalier Section and the Grafton Section. All but two are complete with minor work remaining on the remaining two. Another accomplishment taking place is the material excavation of the driving path going into the Grafton Section yard and replacing it with geotextile fabric and gravel.

As can be seen by the above work, our maintenance crews have been busy this past biennium, maintaining and improving our highways, improving how we do business and assisting other districts in a common goal of protecting property during the past two years major floods.

Construction

In 2009-2010, the district continued work on a three-year project involving work on ND Highway 66 at Drayton. The major work items at this location consisted of constructing a new bridge, removal of the existing bridge, realignment of MN Highway 11, ND Highway 66, Kittson County Road 18 and removal of the existing roadways back to the original contours. The new bridge was completed in October 2010 with the old structure being removed in March of 2011. The new bridge deck is 8 inches to 8.5 inches thick (depending on Unit) with a 40-foot roadway width, there is no provision for pedestrian walkway. This bridge is 4,090 feet in length, making it the second longest bridge in the state. Some Items of interest:

- 1, 520,199 lbs of Reinforcing Steel-Epoxy Coated for the Deck and superstructure.
- 2,774,000 lbs of structural steel.
- 33,130 linear feet of 14-by-73 steel piling HP.
- 46,880 linear feet of 14-by-102 steel piling HP.
- 5,427 cubic yards of AAE-3 Concrete for deck and diaphragms.
- 5,696 cubic yards of AE-3 for Piers, Bents, and other substructure concrete.

The construction of the new bridge, construction of embankments and removal of the old structure were a challenge as this area experienced flooding in 2009, 2010 and 2011. The new bridge provided

an essential crossing over the Red River during the flood of 2011.

The district completed reconstruction projects on I-29 from Thompson to just south of Grand Forks. These seven-mile projects included the removal of the existing northbound and southbound roadways and paving with 11 inches of Portland Cement Concrete Pavement (PCC) pavement. These are the first two of four reconstruction projects between the south district boundary and the city of Grand Forks.

The district has completed a variety of preventive

maintenance projects between 2009 and 2011 covering 291 miles, which is a significant amount of improved roadway for the public to utilize.

District Wide

All of the above tasks, and many more, require the support from other sections within the district. The Sign Shop, Maintenance Shop, District Lab, Administrative staff and Parts Room all have had a challenging biennium. The entire district has risen to those challenges, and performed admirably.

Minot District

Jim Redding, Engineer

Responsibilities and Activities

The Minot District is located in northwestern part of the state and is responsible for construction and maintenance of over 1,200 lane miles of highways. The district has 71 full-time employees. Construction and maintenance activities for the district are planned, many are designed and scheduled by the district, and are performed out of the District Office and eight outlying Maintenance Sections. During winter months, snow and ice control is provided for the public seven days a week and all maintenance sites beginning at 5 a.m., earlier if needed during emergencies or storm events. Additional support services are provided to the cities, counties, utilities and public from the district, which range from everyday activities to emergency response. Minot Air Force Base is located north of Minot and includes 150 missile silo locations located throughout the area. District Maintenance provides winter escorts to certain missile movements to these sites on state-county-township roads.

Key Accomplishments

Minot District's key accomplishments during the biennium included:

July 1, 2009 to June 30, 2010

- Reconstruction of 13 miles of southbound lanes on US Highway 83 south of Max. This is the last segment of 'old' US Highway 83 to be reconstructed to current standards. The cost of this project included; \$8.5 million reconstruction in 2009, \$4.6 million surfacing in 2010.
- In 2009, 60 miles of highway were asphalt surfaced at a total cost of \$6.6 million.

- Three structures were replaced in the district including; timber structure on ND Highway 14 northwest of Towner replaced with concrete box culvert (this is next to last timber structure in district) and railroad overhead on US Highway 2 in southwest Minot.
- ND Highway 41, Velva Main Street, was reconstructed as part of ND Roads program.

July 1, 2010 to June 30, 2011

- District Maintenance section building was constructed at Bottineau. Salt/sand storage buildings were constructed by District Maintenance forces at Bottineau, Mohall and Garrison Section yards.
- Asphalt surface completed on 158 miles of highway at a total cost of \$23.6 million
- As biennium ended, Minot area was in middle of unprecedented flood event.



Highway 2 flooding on the east side of Minot.

- » Water levels had forced closure of most Mouse River crossings in the district.
- » On US Highway 83 Bypass, Minot District employees installed temporary water filled barriers and installed plastic sheeting and sand bags on and along concrete barriers to provide flood protection to keep US Highway 83 bypass open. During the flood event, US Highway 83 Bypass was the only north/south route open to public in Minot.
- » Constructed eight-foot-tall dike on US Highway 2, west of Minot with dirt hauled by NDDOT trucks from across the state to keep US Highway 2 open during Mouse River flooding.
- » Over 200 tandem trucks from across the state worked in Minot-Burlington-Sawyer-Velva area during the Mouse River flooding
- » Constructed six temporary grade raises on inundated highways outside the Mouse River basin to keep traffic moving on US Highway 83, ND Highway 53, ND Highway 23, ND Highway 28 and ND Highway 3
- Major intersection reconstruction began on US Highway 2/52 and 13th Street area in Minot.



NDDOT trucks waiting to load dirt build dike on Highway 2 west of Minot.

This project includes constructing access roads, reconstructing 13th Street intersection to a signalized intersection, and modifying several adjacent intersections to improve safety.

- ND Highway 5, Mohall Main Street, reconstructed as part of ND Roads program.
- Intersection reconstruction at six locations along ND Highway 23 to improve safety.

Valley City District

John Thompson, Engineer

Responsibilities and Activities

The Valley City District is located in the south central portion of the state. The region includes the cities of Jamestown and Valley City. The district includes the James and Sheyenne River basins and a region known as a prairie chateau, west of the James River. It is the prairie chateau region, which does not have an established river system that creates a large challenge maintaining a transportation system due to flooding of roadways.

The district is responsible for the operation of 985 miles of roadway. The Valley City District has 72 employees in four functional sections; maintenance, engineering, motor vehicle maintenance and administration.

Responsibilities include: construction contract administration, roadway design, pavement maintenance, and maintenance of roadside features, removal of snow and ice, and right of way management. The district is the point of contact for questions concerning right of way, access to state highways,

utility crossings, outdoor advertising and many other citizen concerns.

Key Accomplishments

During the biennium, 238 miles of roadway were resurfaced with hot bituminous pavement. This is 25 percent of the miles in the district. This included about 44 miles utilizing stimulus funds. The outcome of this work is smooth pavement and we are able to maintain the load carrying capacity of the roadways.

Salt storage buildings were constructed in the Jamestown, Valley City, Edgeley, Ellendale, and Medina sections.

A large project is the re-grading 10 miles of ND Highway 13, east of Wishek. The work involves widening and improving the grades of curves and hills, horizontal and vertical curves, in order to provide a safer roadway in this region. This project also raised the grade of the roadway in a number of locations to provide a roadway above the level of adjacent lakes. The final surfacing of this project will be completed in 2012.

Interstate 94, near Crystal Springs, was flooded by a lake adjacent to the roadway last spring. The district maintained traffic on the roadway utilizing dikes until a contractor was obtained to raise the roadway. This was a major project to design and construct in a very short period of time, with minimal disruption to traffic on a roadway of national importance.



Dikes on I-94 near Crystal Springs.

A new Maintenance Section building was constructed in Wishek. This replaces a building that was in very poor condition and was undersized for the equipment we now use.

There were major challenges due to weather during this biennium. Both winters of this biennium were severe resulting in a large effort to provide a safe roadway for travelers. The larger trucks and enhanced weather forecast systems provided the department with better tools to meet this challenge.

The precipitation during this biennium has been greater than normal. As a result, a large number of closed basins filled to the point where water overtopped the roadways crossing these basins. Water overtopped the roadways at 13 locations.

We also responded to flooding of the James and Sheyenne Rivers and their tributaries. This year, the Valley City District, along with other NDDOT districts, assisted in flood protection in the cities of Bismarck and Minot.

Williston District

Walt Peterson, Engineer

Responsibilities and Activities

The Williston District is responsible for moving people and goods safely over the highways. We maintain over 900 miles of paved highways in the northwest corner of North Dakota. Sixty-two employees are responsible for routine maintenance activities, designing and administering construction programs, and repairing equipment and administering the state fleet program. During our two main seasons, road construction and winter, we affect many customers that use our system. It is our goal to ensure that motorists have a pleasant and safe journey over our roadways.

Key Accomplishments

July 1, 2009 to June 30, 2010

- Completed district-wide centerline and shoulder rumble strips safety project.
- Hot Bituminous Pavement (HBP) overlay of US Highway 2, Blaisdell to Berthold, completing the overlay of the westbound lanes and four-laned US Highway 2.
- Mill and recycle HBP on ND Highway 23, east of Watford City.

July 1, 2010 to June 30, 2011

- Completed a grading and HBP project on six miles of US Highway 85, south of Long X Bridge.
- Began project on 40 miles of US Highway 85, from Watford City to Williston; widening, constructing passing lanes approximately every six miles in each direction, and HBP overlay.



Super 2 passing lane on US Highway 85 between Watford City and Williston.

- Installed right and left turn lanes on US Highway 85, from Grassy Butte to Williston, including a three-lane segment near Williston with a continuous center left-turn lane.
- Began grading project on approximately nine miles of ND Highway 23 from casino west to Reservation Boundary.
- Began 24-mile project, consisting of roadway widening, passing lane construction and HBP on ND Highway 8 from Stanley south to the Junction of ND Highway 23.
- Began project on approximately 16 miles of ND Highway 8 from Stanley north to the Junction of ND Highway 50. The project included roadway widening and HBP.
- Installed a traffic signal at intersection of US Highway 2 and ND Highway 8 near Stanley.
- Began comprehensive traffic plan with the city of Williston; looking at a truck-reliever route to the

west and east of the city to facilitate the movement of the large number of truck-hauled, oil-related material needed for the nearly 200 rigs located predominately in northwest North Dakota.



Truck traffic at US 2 and 85 Bypass through Williston.

NDDOT History

1913

First State Highway Commission formed with three members. Governor L.B. Hanna chairman. No extra compensation.

1917

To get newly available federal funds, North Dakota abolished old commission, created new five-member body: governor as chairman, commissioners of agriculture and labor, and two members appointed by governor.

1920s

By mid-1922, construction completed on more than 1,000 miles of state highway: 20 were graveled; the rest were only earth-graded.

1930s

1935: First drivers' licenses issued.

The department employed thousands with federal relief funds during the Depression.

In six years in the 1930s, under six governors, seven men served as highway commissioner.

1940s

During World War II there was a great shortage of highway materials.

Many highway engineers and other employees left for armed services.

Soldiers returning from Germany cited Autobahn, with its high speeds and controlled access, as model for highway design. This led to interstate program.

1950s

Federal Aid Highway Act of 1956 created.

1956: First interstate contracts in North Dakota let for section of US 10 between Valley City and Jamestown.

1960s

Interstate work continued.

1968: Highway Building on State Capitol Grounds completed.

1970s

1977: North Dakota first state in union to let contract for final stretch of Interstate 29 (between Drayton and Pembina).

1980s

With the completion of the Interstate, department needs changed from construction to maintenance. This philosophy exists to the present day.

Walter R. Hjelle retires after a total of 25 years as Highway Department director (1961-1983 and 1986-1988), the longest tenure in department history.

1990s

January 1990: North Dakota Highway Department became Department of Transportation (NDDOT). Motor Vehicle Department merged into NDDOT as Motor Vehicle Division.

For the first time, more state funding than just enough to match federal funds is necessary to preserve system built over 75 years. System deteriorating faster than state can maintain it.

February 1997: After months of working with consultant, department issues its first strategic business plan.

January 1993 - February 2000: Director Marshall W. Moore's tenure is the second-longest in NDDOT history.

2001

Newly elected Governor John Hoeven names new NDDOT Director David Sprynczynatyk to lead the effort to create a Statewide Strategic Transportation Plan involving all government jurisdictions, all modes of transportation, and the public.

2002

North Dakota's first Statewide Strategic Transportation Plan, TransAction, is completed and introduced by Governor John Hoeven and NDDOT Director David Sprynczynatyk.

2004

A survey was conducted, in cooperation with the University of North Dakota, to gather information regarding how well the department was meeting the needs of its customers. The results showed that 82 percent

of the department's customers were either satisfied or very satisfied. The Drivers License and Motor Vehicle Division's product and service levels earned a 90 percent and 86 percent rating, respectively.

In late 2004, the Highway Performance Classification System was finalized, which was endorsed by the North Dakota Legislature during the 2005 session.

2005

The new Four Bears Bridge was opened in October, followed by the demolition of the old bridge.

2006

Francis Ziegler is appointed by Governor John Hoeven as the new NDDOT director.

North Dakota had 7,385 centerline miles of state highways, and an additional 99,239 miles of county and rural roads, streets, and trails. The 7,385 centerline miles equate to 8,458 roadway miles. At the end of 2006, NDDOT had opened an additional 46 roadway miles as a result of the US Highway 2 four-lane initiative.

2007

TransAction II, the updated Statewide Strategic Transportation Plan, was published in the spring of 2007.

The Interstate 29 reconstruction projects through the Fargo corridor were completed in 2007. Started in 2000, these projects included the reconstruction of six interchanges, seven new loop ramps, 15 new bridges and the expansion of two bridges.

2008

NDDOT completed the four-laning of US Highway 2 between Williston and Minot with the total of 97 miles of four-lane highway added to the system when the project was finished in October 2008.

The new Liberty Memorial Bridge in Bismarck-Mandan was completed in November 2008.

2009

2009 was one of the largest road construction programs in North Dakota. The NDDOT awarded bids on approximately 292 projects which amounted to \$383 million in road improvement projects.

NDDOT launched the new NDteendrivers.com Web site aimed at informing teens about safe driving habits.

2010

The new Drayton-Robbin Bridge crossing the Red River near Drayton was completed.

NDDOT launched a new law enforcement program across the state called the Regional Driving Under the Influence (DUI) Task Force in an effort to deter drunk driving throughout North Dakota.

2011

Construction was conducted for the US Highway 85 Super 2 Project, with intermittent passing and turn lanes, between Watford City and Williston.